

In The Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (canceled).

2. (currently amended) ~~The method according to Claim 1,~~ A method of forming an electronic device including a substrate and a raised pattern on the substrate wherein the raised pattern has a surface opposite the substrate, the method comprising:

forming a first insulating layer on the raised pattern and on the substrate wherein forming the first insulating layer comprises forming a first portion of the first insulating layer on the surface of the raised pattern opposite the substrate and on the substrate using a first processing condition and forming a second portion of the first insulating layer on the surface of the raised pattern opposite the substrate and on the substrate using a second processing condition so that the first portion is between the second portion and the surface of the raised pattern opposite the substrate;

after forming the first insulating layer including the first and second portions, removing portions of the first insulating layer to expose portions of the raised pattern while maintaining portions of the first insulating layer on the substrate; and

after removing portions of the first insulating layer, forming a second insulating layer on the exposed portions of the raised pattern and on the maintained portions of the first insulating layer;

wherein the substrate comprises a semiconductor substrate, wherein the raised pattern comprises a trench isolation pattern in the semiconductor substrate, and wherein maintaining portions of the first insulating layer on the substrate comprises maintaining portions of the first insulating layer in trenches defined by the trench isolation pattern.

3. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein the substrate comprises an integrated circuit substrate, wherein the raised pattern comprises a pattern of transistor gate electrodes, and wherein maintaining portions of the first insulating layer on the substrate comprises maintaining portions of the first insulating layer between transistor gate electrodes.

4. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein the substrate comprises an integrated circuit substrate, wherein the raised pattern comprises a pattern of memory array bit lines, and wherein maintaining portions of the first insulating layer on the substrate comprises maintaining portions of the first insulating layer between memory array bit lines.

Claim 5 (canceled).

6. (currently amended) ~~The method according to Claim 5,~~ A method of forming an electronic device including a substrate and a raised pattern on the substrate, the method comprising:

forming a first insulating layer on the raised pattern and on the substrate wherein forming the first insulating layer comprises forming a first portion of the first insulating layer using a first processing condition and forming a second portion of the first insulating layer using a second processing condition;

after forming the first insulating layer including the first and second portions, removing portions of the first insulating layer to expose portions of the raised pattern while maintaining portions of the first insulating layer on the substrate; and

after removing portions of the first insulating layer, forming a second insulating layer on the exposed portions of the raised pattern and on the maintained portions of the first insulating layer;

wherein the first insulating layer includes closed voids therein, and wherein removing portions of the first insulating layer comprises opening the voids in the first insulating layer, and

wherein openings in the voids are substantially at least as wide as any portions of the opened voids between the openings and the substrate.

7. (currently amended) The method according to ~~Claim 5~~ Claim 6, wherein the closed voids are located in the first insulating layer between portions of the raised pattern.

8. (currently amended) The method according to ~~Claim 5~~ Claim 6, wherein the second insulating layer fills the opened voids.

9. (currently amended) The method according to ~~Claim 4~~ Claim 6, wherein:
forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a first pressure; and
forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a second pressure different than the first pressure.

10. (currently amended) The method according to ~~Claim 4~~ Claim 6, wherein:
forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a first bias power; and
forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a second bias power different than the first bias power.

11. (currently amended) The method according to ~~Claim 4~~ Claim 6, wherein:
forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a pressure in the range of about 1 milliTorr to about 5 milliTorr and a bias power in the range of about 500 Watts to about 1500 Watts.

12. (original) The method according to Claim 11, wherein forming the first portion of the first insulating layer using the first processing condition comprises using a processing gas including an oxygen gas at a flow rate in the range of about 30sccm to about 150sccm, a helium gas at a flow rate in the range of about 10sccm to about 200sccm, and a silane gas at a flow rate in the range of about 10sccm to about 100sccm.

13. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein:
forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a pressure in the range of about 3 milliTorr to about 10 milliTorr and a bias power in the range of about 1000 Watts to about 5000 Watts.

14. (original) The method according to Claim 13, wherein forming the second portion of the first insulating layer using the second processing condition comprises using a processing gas including an oxygen gas at a flow rate in the range of about 30sccm to about 150sccm, a helium gas at a flow rate in the range of about 10sccm to about 300sccm, and a silane gas at a flow rate in the range of about 10sccm to about 100sccm.

15. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein forming the first insulating layer comprises forming the first insulating layer using a high density plasma chemical vapor deposition (HDP-CVD).

16. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein removing portions of the first insulating layer comprises etching back portions of the first insulating layer without mechanical polishing while etching back.

17. (original) The method according to Claim 16, wherein removing portions of the first insulating layer further comprises mechanical polishing separate from etching back.

18. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein removing portions of the first insulating layer comprises removing portions of the first insulating layer beyond portions of the raised pattern so that the raised pattern extends beyond the maintained portions of the first insulating layer and so that the maintained portions of the first insulating layer are recessed relative to the exposed portions of the raised pattern.

19. (currently amended) The method according to ~~Claim 1~~ Claim 6, wherein a height of the first insulating layer between portions of the raised pattern is greater than a height of the raised pattern before removing portions of the first insulating layer.

Claim 20 (canceled).

21. (currently amended) The method according to ~~Claim 20~~ Claim 25, wherein forming the first insulating layer comprises forming a first portion of the first insulating layer using a first processing condition including a first pressure and a first bias power and forming a second portion of the first insulating layer using a second processing condition including a second pressure different than the first pressure and a second bias power different than the first bias power.

22. (currently amended) The method according to ~~Claim 20~~ Claim 25, wherein removing portions of the first insulating layer comprises etching back portions of the first insulating layer without mechanical polishing while etching back.

23. (currently amended) The method according to ~~Claim 20~~ Claim 25, wherein removing portions of the first insulating layer further comprises mechanical polishing separate from etching back.

Claim 24 (canceled).

25. (currently amended) ~~The method according to Claim 24,~~ A method of forming an electronic device including a substrate and a raised pattern on the substrate, the method comprising:

forming a first insulating layer on the raised pattern and on the substrate wherein a height of the first insulating layer between portions of the raised pattern is greater than a height of the raised pattern;

after forming the first insulating layer, removing portions of the first insulating layer while maintaining portions of the first insulating layer so that the raised pattern extends beyond the maintained portions of the first insulating layer and so that the maintained portions of the first insulating layer are recessed between portions of the raised pattern; and

after removing portions of the first insulating layer, forming a second insulating layer on exposed portions of the raised pattern and on the maintained portions of the first insulating layer;

wherein the first insulating layer includes closed voids therein, and wherein removing portions of the first insulating layer comprises opening the voids in the first insulating layer wherein openings in the voids are substantially at least as wide as portions of the opened voids between the openings and the substrate.

26. (currently amended) ~~The method according to Claim 24~~ Claim 25, wherein the closed voids are located in the first insulating layer between portions of the raised pattern.

27. (original) The method according to Claim 26, wherein the second insulating layer fills the opened voids.

Claims 28-58 (canceled).

59. (new) The method according to Claim 2, wherein the first insulating layer includes closed voids therein, and wherein removing portions of the first insulating layer comprises opening the voids in the first insulating layer.

60. (new) The method according to Claim 59, wherein openings in the voids are substantially at least as wide as any portions of the opened voids between the openings and the substrate.

61. (new) The method according to Claim 59, wherein the closed voids are located in the first insulating layer between portions of the raised pattern.

62. (new) The method according to Claim 59, wherein the second insulating layer fills the opened voids.

63. (new) The method according to Claim 2 wherein the first portion of the first insulating layer is on the surface of the raised pattern opposite the substrate and in the trenches defined by the trench isolation pattern.

64. (new) The method according to Claim 63 wherein the first portion of the first insulating layer are between the second portion of the first insulating layer and the trenches defined by the trench isolation pattern.

65. (new) The method according to Claim 2, wherein:
forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a first pressure; and
forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a second pressure different than the first pressure.

66. (new) The method according to Claim 2, wherein:
forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a first bias power; and

forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a second bias power different than the first bias power.

67. (new) The method according to Claim 2, wherein:

forming the first portion of the first insulating layer using the first processing condition comprises forming the first portion of the first insulating layer using a pressure in the range of about 1 milliTorr to about 5 milliTorr and a bias power in the range of about 500 Watts to about 1500 Watts.

68. (new) The method according to Claim 67, wherein forming the first portion of the first insulating layer using the first processing condition comprises using a processing gas including an oxygen gas at a flow rate in the range of about 30sccm to about 150sccm, a helium gas at a flow rate in the range of about 10sccm to about 200sccm, and a silane gas at a flow rate in the range of about 10sccm to about 100sccm.

69. (new) The method according to Claim 2, wherein:

forming the second portion of the first insulating layer using the second processing condition comprises forming the second portion of the first insulating layer using a pressure in the range of about 3 milliTorr to about 10 milliTorr and a bias power in the range of about 1000 Watts to about 5000 Watts.

70. (new) The method according to Claim 69, wherein forming the second portion of the first insulating layer using the second processing condition comprises using a processing gas including an oxygen gas at a flow rate in the range of about 30sccm to about 150sccm, a helium gas at a flow rate in the range of about 10sccm to about 300sccm, and a silane gas at a flow rate in the range of about 10sccm to about 100sccm.

71. (new) The method according to Claim 2, wherein forming the first insulating layer comprises forming the first insulating layer using a high density plasma chemical vapor deposition (HDP-CVD).

72. (new) The method according to Claim 2, wherein removing portions of the first insulating layer comprises etching back portions of the first insulating layer without mechanical polishing while etching back.

73. (new) The method according to Claim 72, wherein removing portions of the first insulating layer further comprises mechanical polishing separate from etching back.

74. (new) The method according to Claim 2, wherein removing portions of the first insulating layer comprises removing portions of the first insulating layer beyond portions of the raised pattern so that the raised pattern extends beyond the maintained portions of the first insulating layer and so that the maintained portions of the first insulating layer are recessed relative to the exposed portions of the raised pattern.

75. (new) The method according to Claim 2, wherein a height of the first insulating layer between portions of the raised pattern is greater than a height of the raised pattern before removing portions of the first insulating layer.